

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

**MORPHOMETRIC:**

Lake: ENFIELD RESERVOIR	Lake Area (ha):	6.68
Town: CANAAN	Maximum depth (m):	3.9
County: Grafton	Mean depth (m):	1.8
River Basin: Connecticut	Volume (m <sup>3</sup> ):	120500
Latitude: 43°39'55" N	Relative depth:	1.3
Longitude: 72°09'05" W	Shore configuration:	1.42
Elevation (ft): 947	Areal water load (m/yr):	26.59
Shore length (m): 1300	Flushing rate (yr <sup>-1</sup> ):	14.80
Watershed area (ha): 388.5	P retention coeff.:	0.45
% watershed ponded: 0.0	Lake type:	natural w/dam

**BIOLOGICAL:**

27 February 1992

24 July 1991

DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 50%	ULOTHRIX 50%
	#2	DINOBRYON 35%	MICROCYSTIS 30%
	#3	TABELLARIA 15%	
PHYTOPLANKTON ABUNDANCE (cells/mL)			3410
CHLOROPHYLL-A (µg/L)			3.79
DOM. ZOOPLANKTON (% TOTAL)	#1	KELICOTTIA 42%	KELICOTTIA 46%
	#2	POLYARTHRA 40%	NAUPLIUS LARVA 16%
	#3		DAPHNIA 12%
ROTIFERS/LITER		183	113
MICROCRUSTACEA/LITER		26	105
ZOOPLANKTON ABUNDANCE (#/L)		209	218
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			2.4
BOTTOM DISSOLVED OXYGEN (mg/L)		10.3	0.7
BACTERIA (fecal col., #/100 ml)	#1		< 10
	#2		< 10
	#3		

**SUMMER THERMAL STRATIFICATION:**

stratified

Depth of thermocline (m): 3.0  
Hypolimnion volume (m<sup>3</sup>): None  
Anoxic volume (m<sup>3</sup>): 200

**CHEMICAL:**

Lake: ENFIELD RESERVOIR  
Town: CANAAN

	27 February 1992		24 July 1991		
DEPTH (m)	1.0	3.0	1.0		3.5
pH (units)	6.1	6.1	7.2		6.8
A.N.C. (Alkalinity)	9.3	9.2	6.8		7.9
NITRATE NITROGEN	< 0.02	< 0.02	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	0.005	0.003	0.013		0.021
CONDUCTIVITY ( $\mu$ mhos/cm)	45.2	45.2	36.9		36.9
APPARENT COLOR (cpu)	13	13	14		18
MAGNESIUM			0.68		
CALCIUM			4.1		
SODIUM			1.4		
POTASSIUM			0.70		
CHLORIDE	< 3	< 3	< 2		< 2
SULFATE	8	8	5		5
TN : TP					
CALCITE SATURATION INDEX			2.7		

All results in mg/L unless indicated otherwise

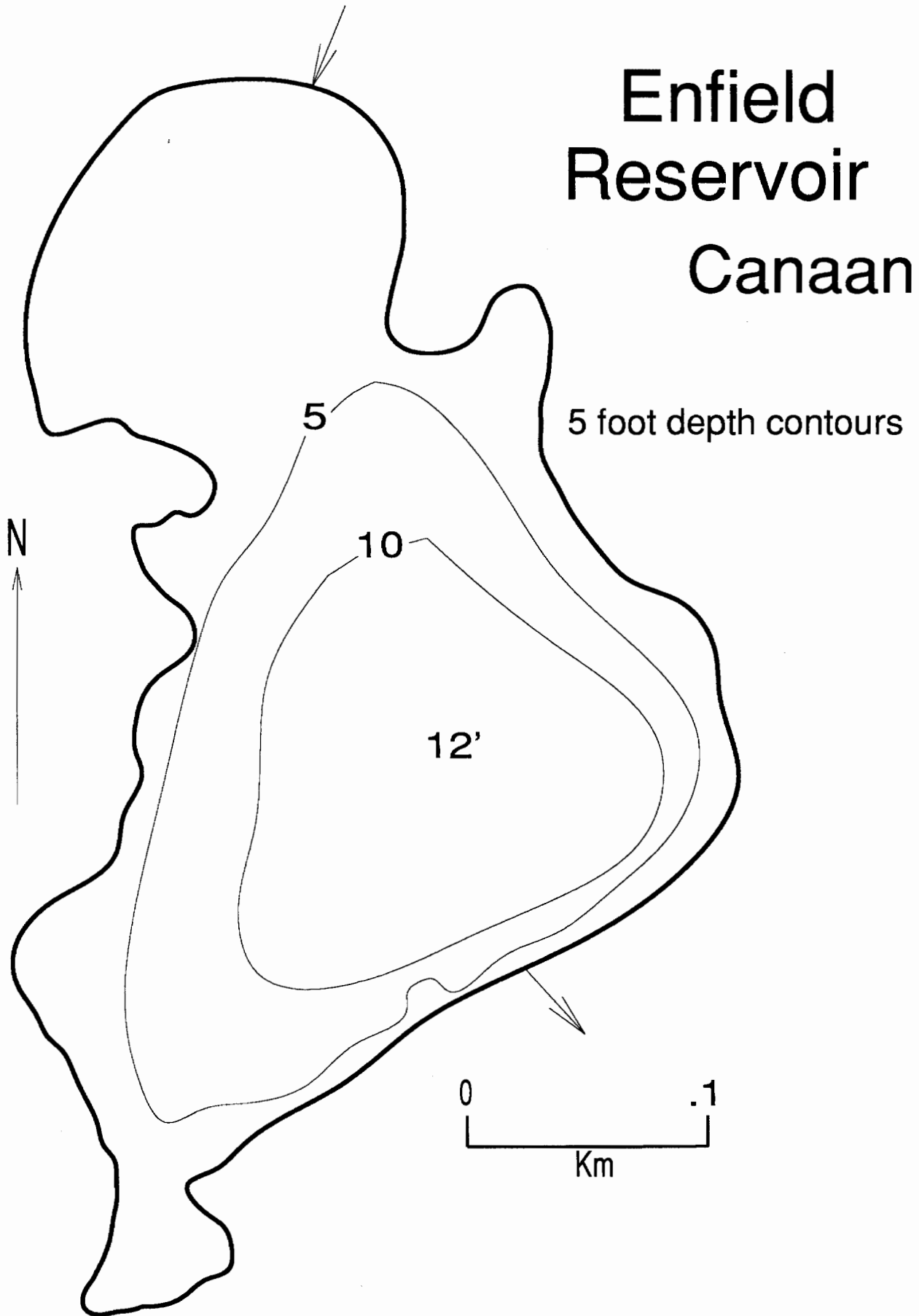
**TROPHIC CLASSIFICATION: 1991**

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	0	0	3	Oligo.

**COMMENTS:**

1. This is an abandoned water supply reservoir for the Town of Enfield.
2. The southeastern shoreline was an earth and rock dam which still had a water intake structure in place.
3. Rocks were exposed in both the northern and southwestern coves.
4. No boat access; no cottages on the pond.
5. The filamentous green alga *Ulothrix* (60%) was the dominant wholewater plankton genera. Greens (80%) were the dominant class.

# Enfield Reservoir Canaan



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**COMMENTS :**

**\*Dissolved oxygen values are in mg/L**

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Reser  
C

N

0 .1  
Km

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